COMPLETE CLAIM LISTING (Marked-up)

 (currently amended) A process for synthesizing substantially enantiomerically pure 4methylene-L-glutamic acid and analogs esters thereof having the formula

$$R_1O_2C \xrightarrow{\qquad \qquad H \\ NH_2} CO_2R_2$$

wherein R_1 and R_2 are individually hydrogen or C_1 - C_6 alkyl, said process comprising the steps of:

- a. providing a (2S)-pyroglutamic acid or <u>ester</u> a <u>derivative</u> thereof as a starting material;
- b. converting the starting material to a 4-enamine derivative pyroglutamic acid intermediate or ester thereof;
- c. hydrolyzing the 4-enamine <u>intermediate</u> derivative to a 4-hydroxymethylidene [derivative] <u>pyroglutamic acid intermediate or ester</u> thereof; and
- d. reducing the 4-hydroxymethylidene <u>intermediate</u> derivative to a 4-methylene <u>pyroglutamic acid or ester</u> derivative of pyroglutamic acid or an ester thereof;
- e. reacting the 4-methylene pyroglutamic acid with a strong base to form linear 4-methylene glutamic acid, or esters and salts thereof.
- 2. (original) The process of Claim 1 wherein step b includes reacting the starting material with an amide or an acetal.

- 3. (original) The process of Claim 2 wherein step b includes reacting the starting material with an acetal at a temperature ranging from 70 C to 130 C.
- 4. (currently amended) The process of Claim 1 wherein step c includes reacting the 4-enamine intermediate [derivative] with a strong acid.
- 5. (currently amended) The process of Claim 1 wherein step d includes reacting the 4-hydroxymethylidene <u>intermediate</u> [derivative] with a carbonate salt.
- 6. (original) The process of Claim 1 wherein the strong base is lithium hydroxide.
- 7. (original) The process of Claim 3 wherein the temperature ranges is from 105 C to 115 C.